

**From:** [MCCLINCY Matt](#)  
**To:** [DeMaria, Eva](#)  
**Subject:** FW: Analytical method for C10-C12 aliphatic?  
**Date:** Thursday, September 15, 2016 3:57:10 PM

---

Hi Eva,

See below. I will pass along what Henning receives from APEX.

Matt

---

**From:** LARSEN Henning  
**Sent:** Thursday, September 15, 2016 3:43 PM  
**To:** MCCLINCY Matt  
**Subject:** RE: Analytical method for C10-C12 aliphatic?

Matt, as we have discussed before, I believe it is a very simple modification to the method and that it is substituting quantification by MS rather than and FID. My source for this information was Kent Patton from APEX labs. I've asked Kent to send me a summary of the method with modifications and MRLs in an e-mail so that nothing is lost in translation. I'll send something on to you when I hear back from Kent – which I expect will be relatively soon.

Henning

---

**From:** MCCLINCY Matt  
**Sent:** Thursday, September 15, 2016 2:59 PM  
**To:** LARSEN Henning  
**Subject:** FW: Analytical method for C10-C12 aliphatic?

Henning,

Here you go. Note yellow highlight below.

Matt

---

**From:** MCCLINCY Matt  
**Sent:** Tuesday, August 02, 2016 5:24 PM  
**To:** LARSEN Henning  
**Cc:** PARRETT Kevin; MANZANO Scott  
**Subject:** FW: Analytical method for C10-C12 aliphatic?

Hi Henning,

I know that you are going to be under water when you get back. Please put the request below in the queue, and if you can let me know when you expect to get to this ask, it will help me out.

Thanks,

Matt

---

**From:** MCCLINCY Matt  
**Sent:** Tuesday, August 02, 2016 5:16 PM  
**To:** 'DeMaria, Eva'  
**Cc:** Sheldrake, Sean; Michael Allen ([allenmc@cdmsmith.com](mailto:allenmc@cdmsmith.com))  
**Subject:** RE: Analytical method for C10-C12 aliphatic?

Hi Eva,

Below is an email I sent to DEQ project managers summarizing the status of the TPH groundwater issue that we discussed with you and Davis. The staff that explored the modified EPH/VPH method to achieve lower detection limits is out of the office until mid August. When he returns, I will ask if he can pull together a summary of what the proposed method modifications were.

Matt

---

All,

I wanted to let you know that EPA has clarified the analytical program for TPH in groundwater. The PRG summary table in Section 2 of EPA's June 2016 FS, only identifies TPH diesel as a contaminant. There is a sediment value (RAO 5) and groundwater value (RAO 8). The groundwater value is not a diesel value; it is a value for the aliphatic hydrocarbon C10-C12 fraction. The Volatile Petroleum Hydrocarbons (VPH) Fractions or the Extractable Petroleum Hydrocarbons (EPH) Fractions analytical methods can be used to quantifying multiple carbon chain length fractions of both aliphatic and aromatic hydrocarbons within the range of C5 – C12 for VPH, and C8 – C34 for EPH. Both VPH and EPH methods are capable of reporting results for the C10 – C12 aliphatic hydrocarbon range, whereas neither the NWTPH-Gx or -Dx methods can report results for C10 – C12 aliphatic hydrocarbons.

Petroleum groundwater sites should characterize the aliphatic hydrocarbon C10-C12 fraction using the VPH/EPH method. These methods have a method detection limit in the 40 to 50 ug/L range depending on matrix conditions. Since the RAO 8 PRG is 2.6 ug/L we will be making source control decision on the VPH/EPH method detection limit. DEQ has done some work with our lab and contract labs to identify a modified method which can achieve the 2.6 ug/L detection limit. However, after discussion with EPA it was agreed that EPA will be the lead in reviewing and approving a modified analytical method to achieve lower detection limits for Portland Harbor. If and when this occurs, we will adopt a modified method at that time for groundwater source control.

Petroleum groundwater sites should also be using the NWTPH-Gx and Dx methods to

characterize total TPH as DEQ continues to use the 1 mg/L total TPH as a standard for groundwater discharging to surface water.

Please let me know if you have any questions.

Matt McClincy  
Oregon Department of Environmental Quality  
Northwest Region  
700 NE Multnomah St., Suite 600  
Portland, Oregon 97232-4100  
Phone 503-229-5538  
Fax 503-229-6945

---

**From:** DeMaria, Eva [<mailto:DeMaria.Eva@epa.gov>]  
**Sent:** Tuesday, August 02, 2016 2:50 PM  
**To:** MCCLINCY Matt  
**Cc:** Sheldrake, Sean; Michael Allen ([allenmc@cdmsmith.com](mailto:allenmc@cdmsmith.com))  
**Subject:** Analytical method for C10-C12 aliphatic?

Hi Matt-

I understand that DEQ developed an analytical method specifically for the RAO 8 value for C10 – C12 aliphatic fraction of diesel range organics. Could you provide me a background and the status of this? Thanks.

Eva

[Eva DeMaria](#)  
Office of Environmental Cleanup | Superfund Site Cleanup Unit #2  
U.S. EPA Region 10 | 1200 Sixth Avenue, Ste. 900, ECL-122 | Seattle, WA 98101  
P: 206-553-1970 | [demaria.eva@epa.gov](mailto:demaria.eva@epa.gov)